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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DANG, HUNG Q

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/586,628	YAHATA, HIROSHI	
	Examiner	Art Unit	
	Hung Q. Dang	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 6 is objected to because of the following informalities:

Claim 6 recites, "payback path information," which should be "playback path information". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 recites the limitation "the plurality of video streams". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5t^h ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of

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technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows.

Claims 1-6 recite "a recording medium". However, the claims do not define a computer-readable recording medium and is thus non-statutory for that reason (i.e., "when functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" - Guidelines Annex IV). The examiner suggests amending the claim to embody functional descriptive data on "computer-readable recording medium" or equivalent wordings in order to make the claim statutory. Any amendment to the claim would be commensurate with its corresponding disclosure.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture or composition of matter and should be rejected under 35 U.S.C. Sec. 101. Certain types of descriptive material, such as music, literature, art, photographs, and mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture or composition of matter. USPTO personnel should be prudent in applying the foregoing guidance. Nonfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer-readable medium to provide the necessary functional and structural

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interrelationship to satisfy the requirements of 35 U.S.C. Sec. 101. The presence of the claimed nonfunctional descriptive material is not necessarily determinative of nonstatutory subject matter. For example, a computer that recognizes a particular grouping of musical notes read from memory and upon recognizing that particular sequence, causes another defined series of notes to be played, defines a functional interrelationship among that data and the computing processes performed when utilizing that data, and as such is statutory because it implements a statutory process.

Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-6 recite “a recording medium” comprising video stream and copy control information, which are an arrangement of pure data and which do not impart functionality to a computer or computing device, and is thus considered nonfunctional descriptive material. Such nonfunctional descriptive material, in the absence of a functional interrelationship with a computer, does not constitute a statutory process, machine, manufacture or composition of matter and is thus non-statutory per se.

Claim 13 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 13 recites, "a program." However, it appears that such would reasonably be interpreted by one of ordinary skill in the art as software, per se. This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture, or a composition of matter. Software does not fall within a statutory category since it is clearly not a series of steps or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Kori et al. (US 2004/0028385 - hereinafter Kori).

Regarding claim 1, Kori discloses a recording medium comprising: a video stream ([0182]); and a plurality of pieces of copy control information ([0013]; [0014]; [0187]; [0188]; [0191]; [0334]; [0326]; [0338]), wherein the video stream contains video composed of a plurality of frame images ([0182] – *the video signal is inherently*

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composed of a plurality of frame images), and the plurality of pieces of copy control information indicates different restrictions on recording of a video signal that is converted from the frame images ([0182] – the video signal is inherently composed of a plurality of frame images; [0187]; [0188]; [0191]; Fig. 8; [0192]; [0193]; [0326]; [0334]; [0338]), the restrictions differing depending on quality levels at which the video signal is output ([0192]; [0193]; [0197]; [0326]; [0334]; [0338] – SCMS or CGMS is used for normal rate copying – UCS is used for high rate copying – wherein copying rates reflect quality levels at which the video signal is output).

Regarding claim 2, Kori also discloses each quality level shows a resolution level of the frame images represented by the video signal ([0192]; [0193]; [0197] – *wherein copying rates reflect quality levels at which the video signal is output that show temporal resolution levels of the frame images to be copied, which is a resolution level*), and the copy control information corresponding to a low-resolution level indicates less strict restriction than restriction indicated by the copy control information corresponding to a high-resolution level ([0188]; [0191]; Fig. 8; [0192]; [0193]; [0326]; [0326]; [0334]; [0338] – *SCMS or CGMS is used for low rate copying, which is a temporally low resolution level - UCS is used for high rate copying, which is a temporally high resolution level - as disclosed SCMS or CGMS is less restrictive than UCS*).

Regarding claim 3, Kori also discloses the copy control information corresponding to the low-resolution level indicates permission to record the video signal only a single time ([0008] – *state of “10” of CGMS indicates permission to record the video signal only a single time*).

Regarding claim 4, Kori also discloses a plurality of video streams ([0182] – *wherein the video signal can be arbitrarily divided into a plurality of video streams*) each piece of copy control information indicates a restriction on recording of a video signal resulting from playback of one of the video streams ([0188]; [0191]; *Fig. 8*; [0192]; [0193]; [0326]; [0326]; [0334]; [0338]).

Regarding claim 5, Kori also discloses playback section information defining a playback section of the video stream, wherein each piece of copy control information indicates a restriction on recording of a video signal resulting from playback of the playback section ([0235]-[0241]; [0326] – *playback section information which corresponds to the control signal determining whether or not the video signal is prohibited, thus defining a playback section of the video stream upon recording – the playback section is the whole video signal that is to be protected*).

Regarding claim 6, Kori also discloses playback path information defining a playback path of the video stream, wherein each piece of copy control information indicates a restriction on recording of a video signal resulting from playback of the video stream following the playback path ([0235]-[0241]; [0326] – *playback path information which corresponds to the control signal determining whether or not the video signal is prohibited, thus defining a playback path of the video stream upon recording – the playback path is the whole video signal that is to be protected*).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aridome (US 2004/0126097) and Kori et al. (US 2004/0028385 - hereinafter Kori).

Regarding claim 7, Aridome discloses a playback device for executing playback of video composed of a plurality of frame images (*Fig. 4A; [0164]-[0169]*), comprising: a read unit operable to read a video stream from a recording medium (*[0165]*); a frame memory (*[0168]; Fig. 7 – buffer 228*); a video decoder operable to decode the video stream so as to sequentially obtain and write the frame images on the frame memory (*[0168]; Fig. 7 – video decoder 225*); and an output unit operable to generate a video signal from the frame images sequentially written on the frame memory and output the video signal (*[0168]*).

However, Aridome does not disclose the recording medium has a plurality of pieces of copy control information recorded thereon, and the output unit includes an assigning subunit operable to assign, to the video signal, one of the plurality of pieces of copy control information corresponding to a quality level of the video signal.

Kori discloses recording medium has a plurality of pieces of copy control information recorded thereon (*[0182] – the video signal is inherently composed of a plurality of frame images; [0187]; [0188]; [0191]; Fig. 8; [0192]; [0193]; [0326]; [0334]; [0338]*), and the output unit includes an assigning subunit operable to assign, to the video signal, one of the plurality of pieces of copy control information (*[0343]; [0347]*) corresponding to a quality level of the video signal (*[0192]; [0193]; [0197]; [0326];*

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[0334]; [0338] – SCMS or CGMS is used for normal rate copying – UCS is used for high rate copying – wherein copying rates reflect quality levels of the video signal at the output).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Kori into the playback device disclosed by Aridome in order to provide and control the copy protection over the video data.

Regarding claim 8, Kori also discloses each quality level shows a resolution level of the frame images (*[0192]; [0193]; [0197] – wherein copying rates reflect quality levels at which the video signal is output that show temporal resolution levels of the frame images to be copied, which is a resolution level*), and the assigning subunit is operable to assign copy control information indicating recording prohibition to the video signal of a high-resolution level (*[0037]; [0039] – illegal copying is prohibited under high-rate copying, which corresponds to a temporally high-resolution level at the output*), and copy control information indicating recording permission to the video signal of a low-resolution level (*[0008]-[0012] – either state of “00” or “10” of CGMS which is applied for low-rate copying, which corresponds to temporally low-resolution level of the signal at the output*).

Regarding claim 9, Kori also discloses a connection unit operable to establish connection with a secure recording medium (*Fig. 9 – via the recording device*); and a judgment unit operable to judge whether the secure recording medium stores therein a certificate of a right to loosen copy control (*[0244]; [0245] – contents ID that is not stored in history information management memory*), wherein the assigning subunit is

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operable to assign the copy control information only when the judgment unit judges that the certificate is stored ([0245]).

Claim 10 is rejected for the same reason as discussed in claim 4 above.

Claim 11 is rejected for the same reason as discussed in claim 5 above.

Claim 12 is rejected for the same reason as discussed in claim 6 above.

Claim 13 is rejected for the same reason as discussed in claim 7 above.

Claim 14 is rejected for the same reason as discussed in claim 7 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is (571)270-1116. The examiner can normally be reached on IFT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621